

**REMARKS**

Claims 1-5, 8-22 and 24-26 are pending upon entry of this amendment. Claims 9-22 have been allowed. New claims 24-26 have been added. Claim 1 has been amended. Support for the amendment and the new claims can be found on, e.g., Figs. 1, 9, 11, and 13, and paragraphs [0014], [0017], [0143]-[0147], [0156]-[0158], [0168], [0169], and [0179] of applicants' specification. No new matter has been presented.

Claims 1-5 and 8 stand rejected under 35 USC 103(a) as being unpatentable over Oster in view of Fukunaga. This rejection is respectfully traversed.

Claim 1, as amended, recites, "said upper clad layer comprises an AlGaAs first upper clad layer and an AlGaAs second upper clad layer with the GaAs etching stop layer therebetween, said AlGaAs second upper clad layer defining a ridge stripe." This feature is not disclosed or suggested by Oster and Fukunaga, alone or in combination.

Oster does not disclose a first upper clad layer, an etching stop layer, and a second upper clad layer defining a ridge stripe, as recited in amended claim 1. Fukunaga discloses an etching block layer 29 in Fig. 4A, but the etching block layer 29 of Fukunaga is made of InGaP rather than GaAs as claimed. In addition, Fukunaga fails to disclose the claimed arrangement of the layers as recited in amended claim 1. The combination of Oster and Fukunaga therefore fails to disclose the features of amended claim 1.

Claim 1 is allowable for this reason. Claims 2-5 and 8 depend from claim 1 and are allowable for at least the same reason.

New claims 24 and 25 depend from claim 1 and are allowable for at least the same reasons. Additionally, Oster and Fukunaga fail to disclose or suggest the claimed GaAs protective layer, current block layer, GaAs buried protective layer, and GaAs cap layer as recited in claims 24 and 25. Claims 24 and 25 are accordingly allowable.

New claim 26 recites features similar to those of claim 1 prior to this amendment, but additionally recites “a conduction-energy band difference  $|\Delta E_c|$  between said upper and/or lower guide layer and said one or more well layers is greater than or equal to 0.2 eV.” The combination of Oster and Fukunaga fails to disclose or suggest this feature. In particular, Oster, which is relied on by the Examiner as disclosing both the guide layer and the well layer of the claimed invention, does not disclose or suggest a conduction-energy band difference of greater than or equal to 0.2 eV between the waveguide layer and the well layer of the active region. Accordingly, claim 26 is allowable.

In view of the above, this application is in condition for allowance.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **204552028900**.

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Respectfully submitted,

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